

**TDMS No.** 97003 - 07  
**Test Type:** CHRONIC  
**Route:** SKIN APPLICATION  
**Species/Strain:** RATS/F 344

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH  
AVERAGE SEVERITY GRADES[b]**  
1,2-Dibromo-2,4-dicyanobutane  
**CAS Number:** 35691-65-7

**Date Report Reqsted:** 08/21/2007  
**Time Report Reqsted:** 12:46:31  
**First Dose M/F:** 07/10/02 / 07/11/02  
**Lab:** BAT

F\_1.Rev.1\_R2

**C Number:** C97003D  
**Lock Date:** 03/23/2005  
**Cage Range:** ALL  
**Date Range:** ALL  
**Reasons For Removal:** ALL  
**Removal Date Range:** ALL  
**Treatment Groups:** Include ALL  
**TDMSE Version:** 1.8.0

Test Type: CHRONIC

1,2-Dibromo-2,4-dicyanobutane

Time Report Requested: 12:46:31

Route: SKIN APPLICATION

CAS Number: 35691-65-7

First Dose M/F: 07/10/02 / 07/11/02

Species/Strain: RATS/F 344

Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	2 MG/KG	6 MG/KG	18 MG/KG
<b>Disposition Summary</b>				
Animals Initially in Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	19	15	17	12
Natural Death	6	8	6	1
Survivors				
Terminal Sacrifice	25	27	27	37
Animals Examined Microscopically	50	50	50	50
<b>ALIMENTARY SYSTEM</b>				
Esophagus	(50)	(50)	(50)	(50)
Inflammation	1 [2.0]			1 [1.0]
Intestine Large, Cecum	(50)	(50)	(50)	(50)
Inflammation	1 [1.0]			
Intestine Large, Colon	(50)	(50)	(50)	(50)
Parasite Metazoan		1	2	3
Serosa, Cyst, Focal	1 [2.0]			
Intestine Large, Rectum	(50)	(50)	(50)	(50)
Parasite Metazoan	3 [1.0]	8	9	4
Muscularis, Hypertrophy				1 [2.0]
Intestine Small, Duodenum	(50)	(50)	(50)	(50)
Erosion	1 [2.0]			
Inflammation	1 [2.0]			
Intestine Small, Ileum	(50)	(50)	(50)	(50)
Intestine Small, Jejunum	(50)	(50)	(50)	(50)
Liver	(50)	(50)	(50)	(50)
Angiectasis				1 [1.0]
Basophilic Focus	24	20	22	26
Clear Cell Focus	17	19	19	21
Congestion				1 [2.0]
Cyst		1 [1.0]		
Degeneration, Cystic	6 [1.2]	3 [1.0]	4 [1.3]	1 [1.0]
Eosinophilic Focus			1	
Fatty Change	6 [2.2]		1 [3.0]	2 [1.0]
Hematopoietic Cell Proliferation	5 [1.0]	5 [1.0]	1 [1.0]	1 [1.0]
Hepatodiaphragmatic Nodule	6 [1.8]	8	9	3

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Species/Strain: RATS/F 344

Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	2 MG/KG	6 MG/KG	18 MG/KG
Inflammation	32 [1.0]	34 [1.0]	32 [1.1]	35 [1.1]
Mixed Cell Focus	9	8	6	11
Necrosis	2 [2.0]		1 [3.0]	1 [2.0]
Bile Duct, Cyst			1 [1.0]	
Bile Duct, Hyperplasia	43 [1.6]	45 [1.4]	46 [1.5]	46 [1.7]
Hepatocyte, Atypia Cellular		1 [1.0]		
Hepatocyte, Hyperplasia	2 [1.0]		1 [2.0]	
Hepatocyte, Hypertrophy	1 [1.0]	1 [2.0]	1 [2.0]	
Mesentery	(10)	(6)	(10)	(9)
Inflammation	1 [2.0]			1 [1.0]
Necrosis	9 [2.4]	6 [3.0]	7 [3.0]	7 [2.6]
Pancreas	(50)	(50)	(50)	(50)
Inflammation	1 [2.0]			
Acinus, Atrophy	16 [1.8]	18 [1.6]	15 [1.8]	18 [1.8]
Acinus, Hyperplasia			1 [2.0]	
Artery, Inflammation, Chronic Active				1 [2.0]
Duct, Cyst	9 [1.4]	9 [1.2]	5 [1.6]	7 [1.4]
Salivary Glands	(50)	(50)	(50)	(50)
Basophilic Focus	1 [1.0]			
Inflammation		1 [2.0]		
Stomach, Forestomach	(50)	(50)	(50)	(50)
Edema	2 [1.5]			1 [4.0]
Erosion				1 [4.0]
Inflammation	5 [2.6]	2 [2.5]	1 [3.0]	2 [2.5]
Ulcer	3 [3.0]	2 [3.5]	2 [3.5]	3 [2.0]
Epithelium, Hyperplasia			2 [2.5]	1 [3.0]
Serosa, Inflammation				1 [2.0]
Stomach, Glandular	(50)	(50)	(50)	(50)
Edema	1 [2.0]			1 [2.0]
Erosion	4 [1.8]			2 [1.0]
Inflammation	4 [1.8]	3 [1.7]		2 [1.5]
Pigmentation	1 [1.0]			
Thrombosis	1 [1.0]			
Ulcer		1 [3.0]		
Glands, Hyperplasia		1 [1.0]		
Tooth	(0)	(0)	(1)	(1)
Inflammation				1 [2.0]
Peridental Tissue, Malformation			1	

a - Number of animals examined microscopically at site and number of animals with lesion

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Test Type: CHRONIC

1,2-Dibromo-2,4-dicyanobutane

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Species/Strain: RATS/F 344

Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	2 MG/KG	6 MG/KG	18 MG/KG
CARDIOVASCULAR SYSTEM				
Heart	(50)	(50)	(50)	(50)
Cardiomyopathy	46 [1.9]	46 [1.9]	49 [2.0]	46 [1.9]
Atrium, Thrombosis	2 [2.5]		1 [3.0]	
Pericardium, Inflammation				1 [1.0]
Valve, Inflammation				1 [2.0]
ENDOCRINE SYSTEM				
Adrenal Cortex	(50)	(50)	(50)	(50)
Angiectasis				1 [2.0]
Atrophy				1 [3.0]
Degeneration, Cystic	4 [2.3]			1 [2.0]
Hyperplasia	9 [1.6]	7 [1.1]	6 [1.8]	14 [1.7]
Hypertrophy	12 [1.8]	9 [1.4]	4 [1.3]	14 [1.5]
Vacuolization Cytoplasmic	29 [1.7]	25 [1.3]	28 [1.8]	26 [1.3]
Adrenal Medulla	(50)	(50)	(50)	(50)
Hyperplasia	13 [1.5]	12 [1.6]	14 [1.8]	13 [1.7]
Hypertrophy	1 [1.0]		1 [1.0]	
Mineralization	1 [1.0]			
Necrosis	1 [2.0]			
Islets, Pancreatic	(50)	(50)	(50)	(50)
Hyperplasia	1 [2.0]	2 [1.5]	3 [1.3]	3 [3.0]
Parathyroid Gland	(49)	(47)	(49)	(46)
Hyperplasia				1 [3.0]
Pituitary Gland	(50)	(50)	(50)	(50)
Pars Distalis, Cyst	3 [1.0]	4 [2.0]	2 [1.5]	3 [1.0]
Pars Distalis, Hyperplasia	17 [2.2]	15 [2.3]	19 [2.2]	16 [2.3]
Pars Distalis, Pigmentation, Hemosiderin	1 [2.0]			
Thyroid Gland	(50)	(50)	(50)	(50)
Hemorrhage		1 [2.0]		
Infiltration Cellular, Mononuclear Cell	1 [1.0]			
Inflammation				1 [1.0]
Thrombosis		1 [1.0]		
C-cell, Hyperplasia	9 [1.3]	16 [1.1]	15 [1.1]	13 [1.0]
Follicular Cell, Hyperplasia	1 [3.0]		1 [1.0]	1 [1.0]

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Lab: BAT

FISCHER 344 RATS MALE	0 MG/KG	2 MG/KG	6 MG/KG	18 MG/KG
GENERAL BODY SYSTEM				
None				
GENITAL SYSTEM				
Epididymis	(50)	(50)	(50)	(50)
Inflammation		1 [2.0]	1 [1.0]	1 [2.0]
Preputial Gland	(50)	(50)	(50)	(50)
Hyperplasia		1 [2.0]	1 [1.0]	1 [2.0]
Inflammation	1 [3.0]			1 [2.0]
Duct, Cyst	2 [3.0]			
Prostate	(50)	(50)	(50)	(50)
Cyst				1 [1.0]
Fibrosis	1 [2.0]			
Inflammation	40 [1.9]	36 [1.9]	37 [2.0]	39 [1.9]
Epithelium, Hyperplasia	18 [1.3]	19 [1.3]	11 [1.2]	19 [1.4]
Seminal Vesicle	(50)	(50)	(50)	(50)
Inflammation	1 [3.0]			
Epithelium, Hyperplasia				1 [1.0]
Testes	(50)	(50)	(50)	(50)
Atrophy	10 [2.1]	7 [2.9]	3 [2.7]	14 [2.3]
Inflammation			1 [2.0]	1 [1.0]
Interstitial Cell, Hyperplasia	15 [1.3]	19 [1.6]	16 [1.6]	20 [1.6]
HEMATOPOIETIC SYSTEM				
Bone Marrow	(50)	(50)	(50)	(50)
Hemorrhage				1 [2.0]
Hyperplasia	20 [3.8]	23 [3.4]	23 [3.3]	18 [3.4]
Lymph Node	(6)	(4)	(5)	(6)
Deep Cervical, Ectasia				1 [3.0]
Mediastinal, Infiltration Cellular, Histiocyte			1 [4.0]	
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Ectasia		1 [2.0]		1 [3.0]
Hyperplasia, Lymphoid				1 [2.0]
Hyperplasia, Plasma Cell	1 [2.0]			
Spleen	(50)	(50)	(50)	(50)

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Fibrosis				1 [3.0]
Hematopoietic Cell Proliferation	3 [2.3]			
Hemorrhage		2 [3.0]	2 [3.5]	1 [2.0]
Hyperplasia, Lymphoid	2 [1.5]	1 [2.0]	4 [2.3]	1 [2.0]
Infarct	1 [3.0]	2 [3.0]		
Thymus	(49)	(46)	(48)	(44)
Mineralization	1 [1.0]			
INTEGUMENTARY SYSTEM				
Mammary Gland	(50)	(49)	(49)	(50)
Cyst				1 [2.0]
Hyperplasia		2 [3.5]		
Inflammation	3 [1.7]		2 [1.5]	2 [1.5]
Skin	(50)	(50)	(50)	(50)
Cyst				1
Dermis, Inflammation	1 [3.0]			
Epidermis, Hyperplasia	1 [3.0]			
Hair Follicle, Cyst		1		1
Site Of Application - Dermis, Fibrosis				4 [1.0]
Site Of Application - Dermis, Inflammation		2 [1.0]	11 [1.0]	45 [1.1]
Site Of Application - Epidermis, Hyperkeratosis		9 [1.0]	47 [1.7]	50 [2.5]
Site Of Application - Epidermis, Hyperplasia	1 [1.0]	5 [1.0]	10 [1.1]	50 [1.6]
Site Of Application - Epidermis, Necrosis				3 [1.0]
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Osteosclerosis				1 [2.0]
Skeletal Muscle	(0)	(0)	(0)	(1)
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Hemorrhage	1 [3.0]	4 [2.5]	6 [2.7]	1 [2.0]

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Hydrocephalus	1 [2.0]	2 [1.5]		1 [2.0]
Infiltration Cellular, Lymphocyte				1 [1.0]
Cerebrum, Developmental Malformation, Focal	1			
Cerebrum, Edema	1 [1.0]			
Cerebrum, Hemorrhage	1 [1.0]			
Spinal Cord	(2)	(0)	(0)	(0)
RESPIRATORY SYSTEM				
Lung	(50)	(50)	(50)	(50)
Hemorrhage			1 [2.0]	
Inflammation	13 [1.5]	4 [1.3]	10 [1.6]	13 [1.4]
Metaplasia, Squamous			1 [2.0]	
Thrombosis		1 [1.0]		
Alveolar Epithelium, Hyperplasia	6 [2.2]	8 [2.4]	8 [1.9]	5 [2.0]
Alveolus, Infiltration Cellular, Histiocyte	14 [1.1]	24 [1.0]	25 [1.2]	19 [1.1]
Serosa, Fibrosis	1 [1.0]			1 [2.0]
Nose	(50)	(50)	(50)	(50)
Fibrosis			1 [2.0]	1 [2.0]
Inflammation	12 [1.7]	21 [2.0]	23 [1.8]	25 [1.9]
Thrombosis	1 [3.0]	1 [3.0]		
Respiratory Epithelium, Hyperplasia				1 [2.0]
Trachea	(50)	(50)	(50)	(50)
Fibrosis	1 [1.0]			
Infiltration Cellular, Mononuclear Cell	1 [1.0]			
Inflammation	2 [1.5]			
SPECIAL SENSES SYSTEM				
Eye	(50)	(50)	(50)	(50)
Cataract	1 [1.0]	2 [1.5]	1 [4.0]	
Retinal Detachment		1 [3.0]		
Synechia		2 [1.5]		
Retina, Atrophy	1 [1.0]	2 [3.5]	1 [4.0]	2 [1.5]
Retina, Dysplasia		1 [1.0]	1 [2.0]	
Harderian Gland	(50)	(50)	(50)	(50)
Hyperplasia	1 [1.0]	1 [1.0]		2 [1.5]
Inflammation	1 [1.0]	1 [3.0]	1 [1.0]	

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FISCHER 344 RATS MALE	0 MG/KG	2 MG/KG	6 MG/KG	18 MG/KG
Zymbal's Gland	(0)	(1)	(1)	(0)
URINARY SYSTEM				
Kidney	(50)	(50)	(50)	(50)
Cyst	1 [2.0]		2 [2.5]	4 [1.8]
Hydronephrosis		2 [1.5]	1 [2.0]	1 [2.0]
Infarct		1 [3.0]		
Mineralization	32 [1.0]	41 [1.0]	38 [1.0]	26 [1.0]
Necrosis				1 [2.0]
Nephropathy	46 [2.0]	44 [1.6]	39 [1.6]	47 [1.7]
Transitional Epithelium, Hyperplasia	1 [1.0]		1 [2.0]	1 [1.0]
Urinary Bladder	(50)	(50)	(50)	(50)
Inflammation	1 [2.0]			
Transitional Epithelium, Hyperplasia	1 [2.0]			

\*\*\* END OF MALE \*\*\*

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<b>Disposition Summary</b>				
Animals Initially in Study	50	50	50	50
Early Deaths				
Moribund Sacrifice	17	16	17	14
Natural Death	4	2	9	5
Survivors				
Terminal Sacrifice	29	32	24	31
Animals Examined Microscopically	50	50	50	50
<b>ALIMENTARY SYSTEM</b>				
Intestine Large, Colon	(50)	(50)	(50)	(50)
Erosion	1 [2.0]			
Parasite Metazoan	1	2	2	1
Intestine Large, Rectum	(50)	(50)	(50)	(50)
Diverticulum		1		
Parasite Metazoan	8	9	10	9
Liver	(50)	(50)	(50)	(50)
Angiectasis		1 [2.0]		
Basophilic Focus	43	35	40 [1.0]	39 [1.0]
Clear Cell Focus	4	7	3	1
Fatty Change	1 [2.0]	3 [1.7]	2 [2.0]	1 [2.0]
Hematopoietic Cell Proliferation	5 [1.2]	3 [1.0]	2 [1.0]	3 [1.0]
Hemorrhage		1 [2.0]		1 [1.0]
Hepatodiaphragmatic Nodule	7	5	5	7
Inflammation	43 [1.1]	33 [1.0]	34 [1.0]	30 [1.0]
Mixed Cell Focus	5	1	1	6
Necrosis	1 [2.0]	2 [1.5]	2 [1.0]	1 [2.0]
Bile Duct, Hyperplasia	16 [1.1]	11 [1.0]	10 [1.0]	15 [1.2]
Hepatocyte, Atypia Cellular			1 [2.0]	
Hepatocyte, Hyperplasia			1 [2.0]	
Hepatocyte, Hypertrophy	4 [2.0]	1 [2.0]	1 [2.0]	
Hepatocyte, Regeneration				1 [3.0]
Portal, Fibrosis	1 [1.0]			
Mesentery	(14)	(12)	(12)	(12)
Inflammation				1 [3.0]
Necrosis	14 [3.0]	12 [3.0]	12 [3.0]	10 [3.0]

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Pancreas	(50)	(50)	(50)	(50)
Basophilic Focus			1	
Inflammation				1 [3.0]
Acinus, Atrophy	9 [1.3]	9 [1.7]	17 [1.6]	11 [1.1]
Acinus, Hyperplasia	1 [1.0]			
Duct, Cyst	5 [1.2]	3 [1.0]	2 [1.0]	6 [1.5]
Salivary Glands	(50)	(50)	(50)	(50)
Basophilic Focus	1 [1.0]			
Inflammation				1 [2.0]
Stomach, Forestomach	(50)	(50)	(50)	(50)
Edema	1 [1.0]			
Fibrosis			1 [3.0]	
Inflammation	1 [3.0]	1 [2.0]	1 [3.0]	2 [1.5]
Ulcer	3 [2.3]		1 [4.0]	2 [2.0]
Stomach, Glandular	(50)	(50)	(50)	(50)
Erosion	2 [1.0]	1 [2.0]	2 [2.5]	
Inflammation	1 [1.0]		1 [2.0]	
Glands, Hyperplasia	1 [2.0]			
Tooth	(1)	(0)	(0)	(0)
CARDIOVASCULAR SYSTEM				
Blood Vessel	(50)	(50)	(50)	(50)
Heart	(50)	(50)	(50)	(50)
Cardiomyopathy	50 [1.4]	44 [1.8]	46 [1.7]	43 [1.7]
Inflammation				1 [3.0]
Atrium, Thrombosis		1 [4.0]		
ENDOCRINE SYSTEM				
Adrenal Cortex	(50)	(50)	(50)	(50)
Accessory Adrenal Cortical Nodule			1 [1.0]	
Angiectasis	1 [2.0]			
Degeneration, Cystic	1 [1.0]	5 [1.6]	5 [1.2]	4 [1.8]
Hyperplasia	7 [1.4]	12 [1.3]	3 [1.0]	4 [1.8]
Hypertrophy	12 [1.4]	16 [1.4]	18 [1.4]	16 [1.6]
Necrosis		1 [4.0]	1 [2.0]	
Vacuolization Cytoplasmic	17 [1.7]	11 [1.2]	17 [1.5]	18 [1.6]
Bilateral, Atrophy	1 [3.0]			

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FISCHER 344 RATS FEMALE	0 MG/KG	2 MG/KG	6 MG/KG	18 MG/KG
Adrenal Medulla	(50)	(50)	(50)	(50)
Hyperplasia	4 [1.5]	3 [1.0]		2 [1.0]
Hypertrophy		1 [2.0]		
Vacuolization Cytoplasmic		1 [2.0]		
Islets, Pancreatic	(50)	(50)	(50)	(50)
Hyperplasia	1 [3.0]		1 [2.0]	
Inflammation	1 [1.0]			1 [1.0]
Parathyroid Gland	(46)	(48)	(48)	(48)
Hyperplasia		1 [1.0]		
Pituitary Gland	(50)	(50)	(50)	(50)
Hemorrhage	1 [2.0]			
Pars Distalis, Cyst	7 [1.7]	15 [2.0]	11 [1.7]	14 [2.1]
Pars Distalis, Hyperplasia	17 [2.5]	26 [2.3]	20 [2.6]	18 [2.1]
Thyroid Gland	(50)	(50)	(50)	(50)
C-cell, Hyperplasia	33 [1.1]	30 [1.1]	20 [1.1]	24 [1.2]
Follicular Cell, Hyperplasia		1 [1.0]		
GENERAL BODY SYSTEM				
None				
GENITAL SYSTEM				
Clitoral Gland	(50)	(50)	(50)	(49)
Hyperplasia			1 [2.0]	4 [1.8]
Inflammation	1 [1.0]		1 [3.0]	2 [3.0]
Duct, Cyst	3 [2.3]	1 [1.0]	2 [2.5]	1 [4.0]
Ovary	(50)	(50)	(50)	(50)
Congestion			1 [2.0]	
Cyst	6 [2.5]	7 [2.0]	6 [2.8]	7 [2.3]
Uterus	(50)	(50)	(50)	(50)
Hemorrhage	1 [3.0]		2 [3.5]	
Hydrometra	1 [2.0]		1 [2.0]	1 [2.0]
Inflammation	2 [1.5]			
Endometrium, Hyperplasia, Cystic	2 [2.0]	1 [2.0]	2 [1.0]	3 [1.7]

## HEMATOPOIETIC SYSTEM

a - Number of animals examined microscopically at site and number of animals with lesion

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Test Type: CHRONIC

1,2-Dibromo-2,4-dicyanobutane

Time Report Requested: 12:46:31

Route: SKIN APPLICATION

CAS Number: 35691-65-7

First Dose M/F: 07/10/02 / 07/11/02

Species/Strain: RATS/F 344

Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	2 MG/KG	6 MG/KG	18 MG/KG
Bone Marrow	(50)	(50)	(50)	(50)
Hyperplasia	15 [3.0]	15 [3.5]	14 [3.9]	18 [3.3]
Lymph Node	(4)	(2)	(3)	(5)
Deep Cervical, Hemorrhage		1 [2.0]		
Mediastinal, Hemorrhage	1 [3.0]			
Pancreatic, Infiltration Cellular, Histiocyte	1 [2.0]		1 [3.0]	
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Atrophy			1 [2.0]	
Hemorrhage		1 [2.0]		
Infiltration Cellular, Histiocyte			1 [2.0]	
Inflammation				1 [3.0]
Spleen	(50)	(50)	(50)	(50)
Accessory Spleen			1	
Atrophy		1 [3.0]		
Fibrosis				1 [1.0]
Hematopoietic Cell Proliferation	2 [1.5]	2 [2.0]	1 [2.0]	
Hemorrhage				1 [3.0]
Infarct		2 [3.0]	1 [4.0]	
Metaplasia, Lipocyte			1 [2.0]	
Capsule, Inflammation	1 [1.0]			
Thymus	(45)	(49)	(48)	(45)
Cyst				2 [2.0]
Inflammation				1 [2.0]
INTEGUMENTARY SYSTEM				
Mammary Gland	(50)	(50)	(50)	(50)
Cyst	2 [3.5]	3 [3.3]	2 [3.0]	2 [3.0]
Galactocoele	1			
Hyperplasia	4 [2.5]	3 [3.0]	1 [3.0]	2 [2.5]
Infiltration Cellular, Mononuclear Cell				1 [1.0]
Inflammation	2 [2.0]			1 [2.0]
Skin	(50)	(50)	(50)	(50)
Dermis, Inflammation	1 [3.0]			
Epidermis, Necrosis				1 [2.0]
Epidermis, Ulcer	1 [3.0]	1 [2.0]		1 [3.0]
Hair Follicle, Cyst				2
Site Of Application - Dermis, Fibrosis		1 [2.0]		1 [3.0]
Site Of Application - Dermis,		5 [2.6]	12 [1.0]	49 [1.4]

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Test Type: CHRONIC

1,2-Dibromo-2,4-dicyanobutane

Time Report Requested: 12:46:31

Route: SKIN APPLICATION

CAS Number: 35691-65-7

First Dose M/F: 07/10/02 / 07/11/02

Species/Strain: RATS/F 344

Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	2 MG/KG	6 MG/KG	18 MG/KG
Inflammation				
Site Of Application - Epidermis, Hyperkeratosis		6 [1.0]	49 [1.5]	48 [2.4]
Site Of Application - Epidermis, Hyperplasia	4 [1.0]	6 [1.8]	25 [1.0]	49 [1.8]
Site Of Application - Epidermis, Necrosis		4 [1.5]		5 [1.4]
Site Of Application - Epidermis, Ulcer		4 [2.0]		1 [2.0]
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Skeletal Muscle	(1)	(0)	(0)	(1)
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Hemorrhage	3 [3.0]	1 [1.0]	1 [3.0]	3 [2.7]
Hydrocephalus	2 [1.0]	3 [1.7]		3 [1.0]
Peripheral Nerve	(2)	(0)	(0)	(1)
Spinal Cord	(1)	(0)	(0)	(1)
Hemorrhage				1 [3.0]
RESPIRATORY SYSTEM				
Lung	(50)	(50)	(50)	(50)
Hematopoietic Cell Proliferation		1 [1.0]		
Hemorrhage			1 [3.0]	
Inflammation	14 [1.2]	8 [1.3]	9 [1.4]	11 [1.5]
Metaplasia, Squamous		1 [2.0]		
Alveolar Epithelium, Hyperplasia	12 [1.8]	8 [1.5]	7 [1.9]	8 [1.3]
Alveolus, Infiltration Cellular, Histocyte	37 [1.1]	28 [1.1]	26 [1.0]	38 [1.1]
Serosa, Inflammation				1 [2.0]
Nose	(50)	(50)	(50)	(50)
Inflammation	7 [1.3]	10 [1.7]	11 [1.7]	9 [1.8]
Polyp, Inflammatory				1 [4.0]
Trachea	(50)	(50)	(50)	(50)
Inflammation			1 [1.0]	

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Test Type: CHRONIC

1,2-Dibromo-2,4-dicyanobutane

Time Report Requested: 12:46:31

Route: SKIN APPLICATION

CAS Number: 35691-65-7

First Dose M/F: 07/10/02 / 07/11/02

Species/Strain: RATS/F 344

Lab: BAT

FISCHER 344 RATS FEMALE	0 MG/KG	2 MG/KG	6 MG/KG	18 MG/KG
SPECIAL SENSES SYSTEM				
Eye	(50)	(50)	(50)	(50)
Cataract	2 [2.0]	3 [3.0]	2 [3.0]	7 [2.4]
Cornea, Edema		1 [2.0]		
Retina, Atrophy	3 [3.7]	3 [4.0]	2 [4.0]	7 [3.7]
Retina, Dysplasia				1 [2.0]
Harderian Gland	(50)	(50)	(50)	(50)
Hyperplasia	1 [2.0]			1 [2.0]
Inflammation	3 [1.0]	2 [1.0]		5 [1.2]
Zymbal's Gland	(0)	(2)	(1)	(0)
URINARY SYSTEM				
Kidney	(50)	(50)	(50)	(50)
Cyst	1 [1.0]		1 [2.0]	
Hydronephrosis	1 [1.0]			
Infarct		1 [3.0]		
Inflammation			1 [1.0]	
Mineralization	39 [1.0]	31 [1.0]	34 [1.0]	38 [1.0]
Necrosis			1 [3.0]	
Nephropathy	40 [1.2]	46 [1.3]	35 [1.4]	37 [1.2]
Thrombosis		1 [2.0]	1 [2.0]	
Renal Tubule, Hyperplasia	1 [3.0]	1 [1.0]		
Transitional Epithelium, Hyperplasia	1 [1.0]	1 [1.0]		
Urinary Bladder	(50)	(50)	(49)	(50)

\*\*\* END OF REPORT \*\*\*

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